Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A method using a computer of simulating radio frequency signal processing circuitry, comprising:

forming a compressed vector based equivalent representation of a radio frequency signal in a wireless communication system;

performing processing on the compressed vector based equivalent representation to simulate operation of the radio frequency processing circuitry on the radio frequency signaloperation, the processing forming a processed compressed vector based equivalent of the radio frequency signal; and

forming an output signal using converting the processed compressed vector based equivalent of the signal to a representation of the radio frequency signal as operated on by the radio frequency processing circuitry.

Claim 2. (Currently Amended) The method of claim 1 wherein information in the compressed vector based equivalent of the radio frequency signal is limited to information of the signal in frequency bands of interest.

Claim 3. (Original) The method of claim 1 wherein the processing simulates non-linear operations.

Claim 4. (Original) The method of claim 1 wherein the processing is compressed vector based processing.

Claim 5. (Original) The method of claim 1 wherein the processing includes linear time invariant processing and non-linear time invariant processing.

Claim 6. (Original) The method of claim 1 wherein the processing is frequency domain processing.

Claim 7. (Original) The method of claim 1 wherein the processing is time domain processing.

Claim 8. (Original) The method of claim 1 wherein the processing simulates RF receiver front-end processing.

Claim 9. (Currently Amended) The method of claim 2 wherein the radio frequency signal is centered about a carrier frequency, and the frequency bands of interest include the carrier frequency and harmonics of the carrier frequency.

Claim 10. (Original) The method of claim 9 wherein the signal is bandwidth limited to a bandwidth B, and the frequency bands of interest are limited to the bandwidth B.

Claim 11. (Currently Amended) A method using a computer of modelling modeling circuitry, comprising:
converting representations of first radio frequency signals to compressed vector based equivalent signals;
processing the compressed equivalent signals to form further compressed vector based equivalent signals to simulate operation of radio frequency circuitry on the first radio frequency signals; and
converting the further compressed equivalent signals to representations of second radio frequency signals resulting from operation of the circuitry on the first radio frequency signals.

Claim 12. (Currently Amended) The method of modelling modeling circuitry of claim 11 wherein the first radio frequency signals are signals about a carrier frequency and harmonics and sub-harmonics of the carrier frequency and the compressed equivalent signals are formed by restricting information in the compressed equivalent signals to signal components about the carrier frequency and harmonics and sub-harmonics of the carrier frequency.

Claim 13. (Currently Amended) The method of ~~modelling~~ modeling circuitry of claim 12 wherein the first radio frequency signals are bandwidth limited and the compressed equivalent signals are bandwidth limited.

Claim 14. (Currently Amended) A system for performing RF signal processing ~~modelling~~ modeling, the system comprising:

signal generator blocks forming compressed vector based equivalent signal representations of radio frequency signals;

RF signal processing blocks processing compressed vector based equivalent signal representations to simulate RF signal processing; and

conversion blocks converting compressed vector based equivalent signals to RF signal representations of signals resulting from RF signal processing.

Claim 15. (Original) The system of claim 14 wherein the RF signal processing blocks are formed using sub-blocks comprising linear time invariant blocks and non-linear time invariant blocks.

Claim 16. (New) The method of claim 1 wherein forming a compressed vector based equivalent representation of the radio frequency signal comprises transforming signal components of the radio frequency signal in frequency bands of interest to an orthogonal plane.